

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

25B823
.2453

Ind



United States
Department of
Agriculture

**Animal and Plant
Health Inspection
Service**

Plant Protection
and Quarantine

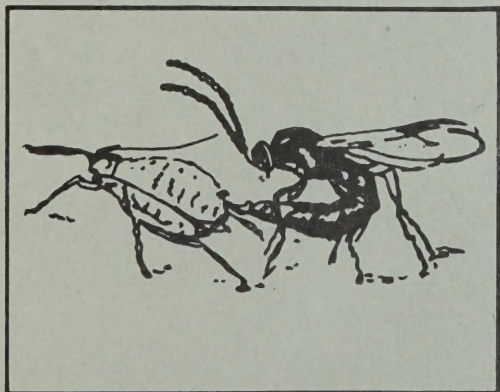
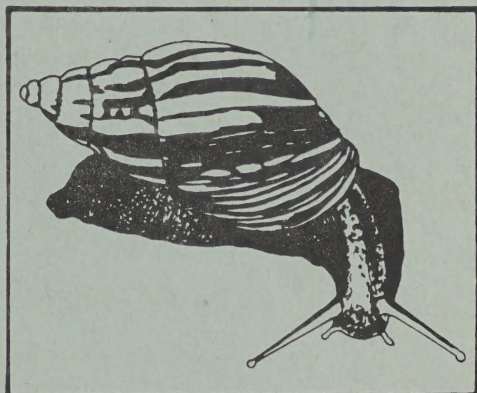
Cooperative Plant Pest Report

VOL. 5 INDEX

JAN 20 '82

1980

PROCUREMENT SECTION
CURRENT SERIAL RECORDS



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR
New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

We cannot make address changes
unless we have your mailing code

COOPERATIVE PLANT PEST REPORT

Volume 5

Index

1980

SPECIAL REPORTS

Changes in scientific name 481

Cooperative survey entomologists 37-39

Cooperative survey plant pathologists 40

Grasshopper outlook - 1980 (map) 116

Hawaii pest report 17-18 75 93 111 130 145 163 186 198-199 224 239 269-270 286 534 646 662 690

Losses: Estimated losses from rust in 1979 212-216

Maps (distribution): Alfalfa weevil 192, Mexican bean beetle 148

Map (quarantine): Gypsy moth 582, pink bollworm 658, witchweed 686

Pest detection in the United States - 1979 24-32, 1980 695-703

Pest interceptions of quarantine significance at ports of entry 23 52 77 95 113 131 147 165 187 225 241 256 272 289

Pests not known to occur in the United States or of limited distribution: An alleculid beetle 424-426, avocado seed moth 352-355, raspberry beetles 41-43, Senn pest 121-124

Publications, Announcing new Plant Protection and Quarantine 704

State survey coordinators 111

Stenolechia bathrodyas, Oriental conifer pest becomes established in coastal California 191

Summary of pest conditions in the U.S. - 1979. Beans and peas 134. Beneficial organisms and their enemies 201-203. Citrus 154. Cole crops 135-136. Contributors 211. Corn, sorghum, sugarcane 53-67. Cotton 114-116. Cucurbits 136. Deciduous fruits and nuts 149-153. Federal and State programs 203-210. Forage legumes 96-101. Forest and shade trees 171-174. Forest disease and insect highlights 167-169. General vegetables 136-138. Introduction 53. Man and animals 188-190. Miscellaneous field crops 118-120. Other tropical and subtropical fruits 154-155. Ornamentals 166-167. Peanuts 105. Potatoes, tomatoes, peppers 132-133. Small fruits 155-156. Small grains 78-84. Soybeans 101-105. Stored products 190. Tobacco 116-118. Turf, pastures, rangeland 84-85. Stored products 190. Tobacco 116-118. Turf, pastures, rangeland 84-85.

Trap collections: 22 51 75 94 111 130
145 164 186 199 224 239 255 271 288
312 331 351 365 388-389 406 422-423
445-446 459 477 494-495 517 535 548-
549 571-572 589-590 613-614 630 649
665

Authors: Eichlin, T.D. 191. Long,
D.L. 212-216. Spilman, T.J. 424-426.

Under each letter of the alphabet, names are grouped according to their pest category. The pest categories are as follows: DISEASES; INSECTS, including other arthropods; SLUGS AND SNAILS; and WEEDS, including parasitic plants. Scientific names should be used to locate all page references except for those pests or groups of pests where scientific names were not reported. In such instances, page references will be found under common names. A combination of common and scientific names of a pest may not appear on the page referred, but one or the other will be present. Underlined page numbers represent references to "Summary of Pest Conditions in the United States - 1979." Trap collections for a particular species are listed at the end of pagination for that species under this heading.

DISEASES

Agrobacterium tumefaciens crown gall 166
Alfalfa bacterial leaf spot Xanthomonas alfalfae
Alfalfa bacterial wilt Corynebacterium insidiosum
Alfalfa downy mildew Peronospora trifoliorum
Alfalfa mosaic virus 249 321 677
Alfalfa rust Uromyces striatus
Alternaria spp. leaf blight 136
an alternaria leaf spot 581
Alternaria solani tomato/potato early blight 234 418 513 582 605
American foulbrood Bacillus larvae
American wheat stripe mosaic virus 71 593 610 698
Anthraxnose leaf blight Colletotrichum graminicola
Aphanomyces euteiches a pea root rot 134
Apple blister spot Pseudomonas papulans
Apple powdery mildew Podosphaera leucotricha
Apple scab Venturia inaequalis
Armillaria mellea shoestring root rot 168
Ascochyta sorghina rough spot 56
Ascosphaera apis chalkbrood 348
Asparagus rust Puccinia asparagi

INSECTS

Abgrallaspis comstocki a diaspidid scale 92 93
Abgrallaspis cyanophylli 347 350 561 569 684 692
Abgrallaspis howardi 12 20 92 93 473 476
Abgrallaspis latastei 77
Acalymma vittata striped cucumber beetle 136 300 325
Acanthocinus sp. a cerambycid beetle 95
Acaudaleyrodes citri a whitefly 77
Achyra rantalis garden webworm 637
Acrobasis nuxvorella pecan nut case-bearer 153 283 305-306 327 346-347 363 381-382 402-403 440 456
Acrosternum spp. 152
Acrosternum hilare green stink bug 105 371 490 532 626
Aculus fockeui plum rust mite 683

Aculus schlechtendali apple rust mite 234 305
Acutaspis perseae a diaspidid scale 14 20 473 476
Acylopus n.sp. a phalacrid beetle 24 83
Acyrtosiphon spp. 361 399 416 435 454 557
Acyrtosiphon kondoi blue alfalfa aphid 7 20 28 49 90 96 100 160 164 221 233 251-252 254 264 279 300-301 311 342 343 361 399 416 435 454 557
Acyrtosiphon pisum pea aphid 7 49 89 100 109 128 134 142 160 182 196 202 221 232 233 251-252 254 264 279 281 300 301 342 349 361 375 399 416 435 454 469 507 526 557
Acyrtosiphon scariolae 138
Acyrtosiphon solani foxglove aphid 490
Adelges laricis a phylloxera 28
Adelges piceae balsam woolly adelgid 168
Adoretus sinicus Chinese rose beetle 113 147
Aedes spp. 189 254
Aedes abstratus 189 223 254 268
Aedes aurifer 611
Aedes canadensis 223 254
Aedes communis 189 254
Aedes crucians 189
Aedes denticus 254
Aedes dorsalis 611
Aedes fitchii 254
Aedes grossbecki 611
Aedes infirmatus 92
Aedes provocans 223 268
Aedes punctor 254
Aedes sollicitans saltmarsh mosquito 188 189
Aedes stimulans 189 254 268
Aedes taeniorhynchus 188
Aedes vexans vexans mosquito 189
Aeolothrips bicolor a thrips 93 94
Aethus nigratus a cydnid bug 691 699
Agallia constricta a leafhopper 72
Ageneotettix deorum a grasshopper 206 329
Agraulis vanillae vanillae a nymphalid butterfly 662 664
Agrilus anxius bronze birch borer 285
Agrilus derasofasciatus a buprestid beetle 627 629
Agromyza frontella alfalfa blotch leafminer 323 435 453 487 580 588 599 610

Agrotis gladiaria claybacked cutworm
 84 135
Agrotis ipsilon black cutworm 53 63
 117 135 136 137 183 195 219 229 245
 259 293-294 315 335 345 370 378 394-
 395 411 431 439 465. Traps: 22 51 75
 94 111 130 164 186 199 224 239 255
 271 288 312 331 351 365 388-389 406
 422-423 445-446 459 477 494-495 517
 535 548-549 571-572 589-590 613-614
 630 649 665
Agrotis orthogonia pale western cut-
 worm 276
Agrotis venerabilis a noctuid moth 84
Alabama argillacea cotton leafworm
 116
Aleurocanthus spiniferus orange spiny
 whitefly 199 200 690 693
Aleurocanthus woglumi citrus blackfly
 17 52 443
Aleurodicus dispersus a whitefly 18
 111 145 199 646
Aleulobus marlatti a whitefly 256
Aleuroplatus vaccinii a whitefly 28
Aleurothrix floccosus woolly white-
 fly 154
Aleurotuberculatus jasmini a whitefly
 138
Aleurotulus sp. a whitefly 24
Alfalfa blotch leafminer Agromyza
frontella
Alfalfa caterpillar Colias eurytheme
Alfalfa leafcutting bee Megachile
rotundata
Alfalfa looper Autographa californica
Alfalfa seed chalcid Bruchophagus
roddi
Alfalfa weevil Hypera postica
Alkali bee Nomia melanderi
Almond moth Ephestia cautella
Alsophila pometaria fall cankerworm
 173 363
Amathes c-nigrum spotted cutworm 155
 374
Amblyomma americanum lone star tick
 144
Amblyomma maculatum Gulf Coast tick
 92 94
Amblyseius fallacis a phytoseiid mite
 349 606
Amblytulus nasutus a mirid bug 28
American dog tick Dermacentor varia-
bilis
Amorbia cuneana a tortricid moth 166
Ampelogypter sesostris grape cane
 gallmaker 156 626 629 642 648 699

Amphitornus coloradus a grasshopper
 206
Amyelois transitella navel orangeworm
 153
Anabrus simplex Mormon cricket 329
 350 387 475 689
Anacamptodes fragilaria a geometrid
 moth 18
Anaglyptus subfasciatus a cerambycid
 beetle 256
Anaphes flavipes a mymarid wasp 404
 441 609 611
Anaphothrips obscurus grass thrips
 371
Anarsia lineatella peach twig borer
 153 282 402
Anasa tristis squash bug 136
Anastatus semiflavus a eupelmid
 wasp 28
Anastrepha sp. a tephritid fly 256
Anastrepha ludens Mexican fruit fly
 289
Anocentor nitens tropical horse tick
 74
Anoecia cornicola an aphid 222 224
 699
Anopheles spp. mosquitoes 223
Anopheles barberi 686 692
Anopheles crucians 189
Anopheles punctipennis 254 268
Anopheles quadrimaculatus 188
Anopheles walkeri 189
Anoplolepis longipes longlegged ant
 1/ 18
Anthaxia sp. a buprestid beetle 131
Anthonomus sp. 23
Anthonomus eugenii pepper weevil 132
Anthonomus grandis grandis boll
 weevil 114-115 233 252 265 279-280
 302 323 343-344 361-362 377-378 401
 418 436 455 471 510-511 532 560 582
 603 640
Anthonomus gularis 19
Anthonomus signatus strawberry weevil
 155
Antianthe expansa solanaceous tree-
 hopper 167
Anticarsia gemmatilis velvetbean
 caterpillar 101 103 105 539 544 581
 625 637 639 640 657 658
Aonidiella aurantii California red
 scale 154 516 606 610
Aonidiella citrina yellow scale 90 94

1/ Carried as an ant in Vol. 5.

Aonidomytilus solidaginis a diaspidid scale 12 20 561 569 607 608 610
Aphidius spp. aphidiid wasps 221 254 349
Aphis craccivora cowpea aphid 182
Aphis fabae bean aphid 133 134 136 154
Aphis gossypii cotton aphid 234
Aphis mellifera honey bee 202
Aphis pawneepae 308 311
Aphis pomi apple aphid 305 363 491
Aphrophora parallela pine spittlebug 171 172 384
Aphytis lingnanensis a eulophid wasp 154
Apion antiquum South African emex weevil 186
Apion ulicis gorse seed weevil 130
Apis mellifera honey bee 18 130 144 348 349
Apple-and-thorn skeletonizer Eutromula pariana
Apple aphid Aphis pomi
Apple grain aphid Rhopalosiphum fitchii
Apple maggot Rhagoletis pomonella
Apple rust mite Aculus schlechtendali
Apterona crenulella a psychid moth 136
Archips argyrospilus fruittree leaf-roller 150 281 305
Argyrotaenia velutinana redbanded leafroller 150 155 266 281-282 304-305 326 345 380 439 606 641 659.
 Traps: 388 422 445-446 459 477 494 517 535 548 589 613 630 649
Arhopalus sp. a cerambycid beetle 241
Army cutworm Euxoa auxiliaris
Armyworm Pseudaletia unipuncta
Ash borer Podosesia syringae
Asiatic oak weevil Cyrtepidistomus castaneus
Asparagus beetle Crioceris asparagi
Asphondylia helianthiglobulus a cecidomyiid midge 10 19 699
Aspidiella hartii a diaspidid scale 256
Aspidiella sacchari 6 20 556 569
Aspidiotus destructor coconut scale 607 610
Aspidiotus nerii oleander scale 109 112
Aspidiotus spinosus 91
Aster leafhopper Macrostelus fascifrons
Asterolecanium pseudomiliaris 307 311

Attagenus fasciatus wardrobe beetle 693
Aulacaspis rosae rose scale 561 570
Aulacaspis tubercularis a diaspidid scale 289
Aulocara ellioti bigheaded grasshopper 206 329 443 458 567 586
Autographa californica alfalfa looper 119 134 137 342 360 416
Avocado seed moth Stenoma catenifer
Aximogastra sp. a eurytomid wasp 165
Azalea lace bug Stephanitis pyrioides

SLUGS & SNAILS

Achatina achatina an achatinid snail 289
Achatina fulica giant African snail 93 186 270 646
Agriolimax laevis marsh slug 286 287

WEEDS

Ambrosia trifida giant ragweed 432
Arceuthobium spp. dwarfmistletoes 168

B

DISEASES

Bacillus larvae American foulbrood 349
Bacillus thuringiensis a larval disease 10
Bacterial bean blight Xanthomonas phaseoli
Bacterial pustule Xanthomonas phaseoli f.sp. sojensis
Bacterial stripe blight Pseudomonas striafaciens
Bacterial stripe Pseudomonas andropogoni
Barley leaf rust Puccinia hordei
Barley powdery mildew Erysiphe graminis f.sp. hordei
Barley stripe Pyrenophora (Drechslera) graminea
Barley yellow dwarf virus 78 81 83 319 339 373 397 414 434 467 487 579 629 675
Basal glume rot Pseudomonas atrofaciens
Bean anthracnose Colletotrichum lindemuthianum

Bean brown spot blight Pseudomonas syringae
 Bean pod blight Diaporthe phaseolorum
 Bean rust Uromyces phaseoli f.sp. typica
 Bean yellow mosaic virus 657
 Beauveria bassiana a corn borer fungus 57 359
 Beet curly top virus 132
 Bidera avenae oat cyst nematode 52
 Bidera mani 435 444
 Bipolaris maydis, see Cochliobolus (Bipolaris) heterostrophus
 Bipolaris sorokiniana, see Cochliobolus (Bipolaris) sativus
 Bipolaris zizicola, see Cochliobolus (Bipolaris) carbonum
 Black chaff Xanthomonas translucens f.sp. undulosa
 Black poplar shoot blight Venturia (Pollaccia) populina
 Black stain root disease Verticillium cladiella wagnerii
 Black stem rust Puccinia graminis
 Blueberry stunt virus 12
 Blue mold Peronospora tabacina
 Botrytis cinerea gray mold blight 169 a fungus 383
 Brown stem rot Phialophora gregata
 Bursaphelenchus lignicolus pinewood nematode 13 20 24 27 49-50 51 73-74 76 91 93 143 146 162-163 164 168 222 224 235 236 240 267 270 284 287 307 311 328 330 348 350 383 387 440 444 491 493 562 568 607-608 610 611 627 629 643 648 660 663 664 684-685 691 692 693 698 703

INSECTS

Bagworm Thyridopteryx ephemeraeformis
 Balclutha hebe a leafhopper 48
 Baldfaced hornet Vespula maculata
 Balsam woolly adelgid Adelges piceae
 Banded cucumber beetle Diabrotica balteata
 Banded pine weevil Pissodes notatus
 Bandedwinged whitefly Trialeurodes abutilonea
 Banks grass mite Oligonychus pratensis
 Baris lepidii imported crucifer weevil 111 699
 Bathyplectes spp. ichneumonid wasps 403 405

Bathyplectes anurus 15 20 201 328 403 405 570 612 687 692
 Bathyplectes curculionis 15-16 20 97 201 223 328 349 415 474 570 612 687 688 692
 Bean aphid Aphis fabae
 Bean leaf beetle Cerotoma trifurcata
 Bean pod borer Maruca testulalis
 Beet armyworm Spodoptera exigua
 Bemisia berbericola a whitefly 627 629 699
 Bemisia giffardi Giffard whitefly 75
 Bigheaded grasshopper Aulocara ellioti
 Birch casebearer Coleophora serratella
 Black cutworm Agrotis ipsilon
 Black pineleaf scale Nuculaspis californica
 Black thread scale Ischnaspis longirostris
 Black turpentine beetle Dendroctonus terebrans
 Black twig borer Xylosandrus compactus
 Black vine weevil Otiiorhynchus sulcatus
 Blackheaded fireworm Rhopobota naevana naevana
 Blackmargined aphid Monellia caryella
 Blatta lateralis a cockroach 74 76
 Blissus insularis southern chinch bug 85 277 287
 Blissus leucopterus leucopterus chinch bug 6 53 67 177-178 261 294 297 337 341 395-396 412 432 451 484 487 503 598 620 635 636 654 673 676
 Blue alfalfa aphid Acyrtosiphon kondoi
 Blueberry maggot Rhagoletis mendax
 Boll weevil Anthonomus grandis grandis
 Bollworm Heliothis zea
 Boopedon auriventris a grasshopper 609 611
 Bothynus gibbosus carrot beetle 66 119
 Bothynus subtropicus a white grub 503
 Boxelder bug Leptocoris trivittatus
 Brachycaudus helichrysi an aphid 282
 Brachycolus asparagi an aphid 19 20 28 111 138 362 699
 Brachycyrtus nawaii an ichneumonid wasp 646 647 695
 Brachydeutera argentata an ephydrid fly 646 647 700
 Braggia uncompahgensis an aphid 29

Braggia urovaneta 29
Brephidium exilis a lycaenid butterfly 646 648
Bristly cutworm Lacinipolia renigera
Bronze birch borer Agrilus anxius
Bronzed cutworm Nephelodes minians
Brown dog tick Rhipicephalus sanguineus
Brown soft scale Coccus hesperidum
Brown stink bug Euschistus servus
Brown wheat mite Petrobia latens
Brownbanded cockroach Supella longipalpa
Bruchophagus roddi alfalfa seed chalcid 417
Bucculatrix thurberiella cotton leaf perforator 183 544 604
Byturus bakeri western raspberry fruitworm 42
Byturus fumatus a byturid beetle 41-44
Byturus rubi eastern raspberry fruitworm 42
Byturus sordidus 42
Byturus tomentosus 41-44
Byturus unicolor 42

SLUGS & SNAILS

Bradybaena serotina a bradybaenid snail 225
Brown garden snail Helix aspersa

WEEDS

Berberis spp. barberry 441 491 514
Bitter nightshade Solanum dulcamara
Black nightshade Solanum nigrum
Blue mustard Chorispora tenella

C

DISEASES

Cedar-apple rust Gymnosporangium juniperi-virginianae
Cedar-hawthorn rust Gymnosporangium globosum
Cephalosporium gramineum cephalosporium stripe 78 79 276 318 339 350 372-373 396 413 467 486 636 647 674 698
Cephalosporium stripe Cephalosporium gramineum
Ceratocystis fagacearum oak wilt 167

Ceratocystis ulmi Dutch elm disease 167 171 197 284 383
Cercospora sp. a fungus 256
Cercospora kikuchii purple stain 680
Cercospora medicaginis summer black stem and leaf spot 96 468 506-507 525 540 580 599 621 636-637 677
Cercospora zeae-maydis corn gray leaf spot 27 553 633
Cereal scab Gibberella (Fusarium) roseum f.sp. cerealis
Chalkbrood Ascosphaera apis
Charcoal rot Macrophomina phaseolina
Cladosporium sp. a leaf blight 132
Claviceps purpurea ergot 83 487
Clover cyst nematode Heterodera trifolii
Cochliobolus (Bipolaris) carbonum helminthosporium leaf spot 53 54 414 499 537 553 593 617 633 669
Cochliobolus (Bipolaris) heterostrophus southern leaf blight 54 522 553 617 618
Cochliobolus (Bipolaris) sativus a helminthosporium root rot 80 spot blotch 434
Coleosporium sp. a rust 23
Colletotrichum sp. a stalk rot 53 55
Colletotrichum graminicola anthracnose leaf blight 56 369 429-430 481 500 522 538 553
Colletotrichum lindemuthianum bean anthracnose 682 693
Colletotrichum orbiculare cucurbit anthracnose 136
Colletotrichum trifolii southern anthracnose 96 677
Common leaf spot Pseudopeziza medicaginis
Common maize rust Puccinia sorghi
Common smut Ustilago maydis
Coniella granati a fungus 165
Conifer root and heart rot Fomes annosus
Cordyceps sp. an insect fungus 348
Corn borer protozoan Nosema pyraustae
Corn brown spot Physoderma maydis
Corn eyespot Kabatella zeae
Corn gray leaf spot Cercospora zeae-maydis
Corn lethal necrosis 53 56 57 463 594 610
Corynebacterium insidiosum alfalfa bacterial wilt 341
Corynebacterium nebraskense Goss's wilt 523 554 568

Covered kernel smut Sphacelotheca sorghi
 Crazy top Sclerophthora macrospora
 Criconemoides sp. a ring nematode 345
Cronartium fusiforme fusiform rust 167
Cronartium ribicola white pine blister rust 167 328 329
 Crown gall Agrobacterium tumefaciens
 Crown rust Puccinia coronata
 Crucifer downy mildew Peronospora parasitica
 Cucurbit anthracnose Colletotrichum orbiculare
Cumminsella sanguinea a fungus 545
Cylindrocladium heptaseptatum a fungus 73 76 695
Cylindrocladium pteridis 73

INSECTS

Cabbage looper Trichoplusia ni
 Cabbage maggot Hylemya brassicae
 Cabbage seedpod weevil Ceutorhynchus assimilis
 Cabbage webworm Hellula rogatalis
 Cactus scale Diaspis echinocacti
 California red scale Aspidiotellus aurantii
Caliroa cerasi pear sawfly 402 583
Calirrhopalus bifasciatus a weevil 685 691 700
Calligrapha scalaris elm calligrapha 308
Callopietria floridensis Florida fern caterpillar 166
Callosobruchus phaseoli a bruchid beetle 225
Calyciforus sp. a weevil 95
Camnula spp. 387 457
Camnula pellucida clearwinged grasshopper 203 205 387 586 587 661 689
 Camphor scale Pseudaulonidius duplex
Camponotus fallax an ant 241
 Cankerworms 168
 Carmine spider mite Tetranychus cinnabarinus
 Carpenter bee Xylocopa virginica
Carpophilus hemipterus driedfruit beetle 18
Carpophilus humeralis a nitidulid beetle 18
 Carrot beetle Bothynus gibbosus
 Carrot rust fly Psila rosae
Carulaspis minima a diaspidid scale

Cat flea Ctenocephalides felis
Cataenococcus guatemalensis a mealybug 113
Cecidomyia resinicola a cecidomyiid midge 13 19 700
Celama sorghiella sorghum webworm 3
Ceratitidis capitata Mediterranean fruit fly 113 443-444 475 476 515 587 689-690 692 703
 Cereal leaf beetle Oulema melanopus
Cerococcus kalmiae 642 647 700
Ceroplastes floridensis Florida wax scale 162
Ceroplastes japonicus a soft scale 165 199
Ceroplastes sinensis 154
Ceratomyia trifurcata bean leaf beetle 103 279 343 361 376 400 454 531 600 625 638-639 657
Ceutorhynchus assimilis cabbage seedpod weevil 29 83 137
Ceutorhynchus litura a weevil 661
Chaetocnema concinna a chrysomelid beetle 374 387 695
Chaetocnema pulicaria corn flea beetle 65 294 336 370 432
 Chaff scale Parlatoria pergandii
Chilo phragmitellus a pyralid moth 241
 Chinch bug Blissus leucopterus leucopterus
 Chinese rose beetle Adoretus sinicus
Chionaspis heterophyllae a diaspidid scale 563 569 685 692
Chionaspis longiloba 308 311
Chionaspis nyssae 561 563 569 607 610
Chionaspis pinifoliae pine needle scale 384
Chlorochroa ligata conchuela 136
Chlorochroa uhleri a pentatomid bug 138
Choristoneura conflictana large aspen tortrix 1/ 169
Choristoneura fumiferana spruce budworm 168 169 363
Choristoneura occidentalis western spruce budworm 171 172
Choristoneura pinus Jack pine budworm 171 172
Choristoneura rosaceana obliquebanded leafroller 282 326
 Christmas berry webworm Cryptoblabes gnidiella

1/ Carried as aspen tortrix in Vol. 5

Chrysobothris texana a buprestid beetle 29
Chrysolina quadrigemina Klamathweed beetle 404 441
Chrysomela scripta cottonwood leaf beetle 172
Chrysomphalus aonidum Florida red scale 607 611
Chrysomphalus dictyospermi dictyospermum scale 627 629
Chrysomphalus pinnulifer a diaspidid scale 113
Chrysopa sp. probably comanche 646
Chrysopa spp. 309 646
Chrysopa carnea common green lacewing 185
Chrysopa comanche 646
Chrysops beameri a tabanid fly 29
Chrysops celatus 29
Chrysops upsilon 224
Chrysoteuchia topiaria cranberry girdler 155
Cinolus obscurus a coreid bug 29
Cinara pinivora an aphid 308 311
Cinara watsoni 13 20 143 146 198 200
Cinnabar moth Tyria jacobaeae
Circulaspis fistulella a diaspidid scale 556 599 611
Citricola scale Coccus pseudomagnoliarum
Citrus blackfly Aleurocanthus woglumi
Citrus mealybug Planococcus citri
Citrus rust mite Phyllocoptruta oleivora
Citrus snow scale Unaspis citri
Citrus thrips Scirtothrips citri
Citrus whitefly Dialeurodes citri
Clavaspis herculeanus a diaspidid scale 473 476
Claybacked cutworm Agrotis gladiaria
Clearwinged grasshopper Camnula pellucida
Clouded plant bug Neurocolpus nubilus
Clover leaf weevil Hypera punctata
Coccinella septempunctata septempunctata a coccinellid beetle 17 29 254 687 691 700
Coccotrypes sp. a scolytid beetle 241
Coccus hesperidum brown soft scale 154
Coccus pseudomagnoliarum citricola scale 284
Cochliomyia hominivorax screwworm 17 75 110 130 145 163 186 210 223 238 255 269 330 350 364
Coconut mealybug Nipaecoccus nipae
Coconut scale Aspidiotus destructor
Codling moth Laspeyresia pomonella
Coelophora pupillata tenspotted lady beetle 379 539
Colaspis brunnea grape colaspis 9 73 103 160-161 221-222 466 470
Coleomegilla maculata a lady beetle 185 198
Coleophora klimeschiella a coleophorid moth 628
Coleophora laricella larch casebearer 173 363
Coleophora parthenica a cecidomyiid midge 661
Coleophora serratella birch casebearer 173
Colias eurytheme alfalfa caterpillar 89 128 182 279 435 453 599 621
Coloradia pandora pandora moth 172
Colorado potato beetle Leptinotarsa decemlineata
Common cattle grub Hypoderma lineatum
Common green lacewing Chrysopa carnea
Comstock mealybug Pseudococcus comstocki
Comstockiella sabalis a diaspidid scale 12 20 129 138 267 270 583 588
Conchuela Chlorochroa ligata
Conoderus vespertinus tobacco wireworm 117
Conotelus mexicanus a nitidulid beetle 151
Conotrachelus nenuphar plum curculio 326 363 381
Conotrachelus pecanae a weevil 90 93 700
Contarinia schulzi a cecidomyiid midge 119
Contarinia sorghicola sorghum midge 66 370 432 450 597
Convergent lady beetle Hippodamia convergens
Coptotermes formosanus Formosan subterranean termite 686-687 691 700
Coquillettidia perturbans a mosquito 189
Corn delphacid Peregrinus maidis
Corn earworm Heliothis zea
Corn flea beetle Chaetocnema pulicaria
Corn leaf aphid Rhopalosiphum maidis
Corythucha morrilli Morrill lace bug 174
Corythucha pergandei a tingid bug 685 693
Corythucha ulmi elm lace bug 308
Cotinis nitida green June beetle 84

Cotton aphid Aphis gossypii
 Cotton fleahopper Pseudatomoscelis seriatus
 Cotton leafperforator Bucculatrix thurberiella
 Cotton leafworm Alabama argillacea
 Cottonwood leaf beetle Chrysomela scripta
 Cottonycushion scale Icerya purchasi
 Cowpea aphid Aphis craccivora
 Crab louse Pthirus pubis
 Cranberry girdler Chrysoteuchia topiaria
 Craterocercus obtusus a tenthredinid sawfly 29
 Crematogaster sp. an ant 131
 Crematogaster scutellaris 187
 Cribrate weevil Otiorhynchus cribricollis
 Crioceris asparagi asparagus beetle 252 265 345
 Crioceris duodecimpunctata spotted asparagus beetle 265 659 664
 Cryptoblabes gnidiella Christmas berry webworm 289
 Cryptophlebia leucotreta false codling moth 147
 Ctenocephalides felis cat flea 190
 Culex spp. mosquitoes 189 223 268
 Culex nigripalpus 188
 Culex pipiens 189
 Culex restuans 92 189
 Culex salinarius 189
 Culex tarsalis 644 648
 Culiseta silvestris minnesotae a mosquito 628 629 686 692
 Curculio caryae pecan weevil 11 73
 Cyclamen mite Steneotarsonemus pallidus
 Cyclocephala sp. a scarab 83
 Cyclocephala borealis northern masked chafer 85
 Cyclocephala immaculata southern masked chafer 85
 Cyclocephala parallela a white grub 503
 Cyrtopistomus castaneus Asiatic oak weevil 14 20
 Cystiphora schmidtii a cecidomyiid midge 404 661

 WEEDS
 Canada thistle Cirsium arvense
 Carduus sp. a thistle 384
 Carduus nutans musk thistle 203 441 474 609 661

Centaurea diffusa diffuse knapweed 21 203 628
 Centaurea maculosa spotted knapweed 21 330 628 661
 Centaurea repens Russian knapweed 287
 Chondrilla juncea rush skeletonweed 21 403 404 474 533
 Chorispura tenella blue mustard 270
Cirsium arvense Canada thistle 21 609 661
 Cowpea witchweed Striga gesnerioides

D

DISEASES

Diaporthe phaseolorum bean pod blight 101
 Diaporthe phaseolorum f.sp. caulivora soybean stem canker 101
 Diaporthe (Phomopsis) phaseolorum f.sp. sojae soybean pod and stem blight 101 678
 bean pod blight 101
 Diplodia fruit rot Diplodia natalensis
 Diplodia maydis diplodia stalk rot 55
 Diplodia natalensis diplodia fruit rot 682 691 698
 Diplodia stalk rot Diplodia maydis
 Ditylenchus dipsaci stem and bulb nematode 262
 Dutch elm disease Ceratocystis ulmi

INSECTS

Dactynotus helianthicola 10 11 19 20 700
 Dactynotus rudbeckiae goldenglow aphid 29
 Dacus cucurbitae melon fly 77 111 224
 Dacus dorsalis oriental fruit fly 113
 Darksided cutworm Euxoa messoria
 Dasineura gleditchiae a cecidomyiid midge 29 174 643 648
 Datana integerrima walnut caterpillar 153
 Delphacodes spp. delphacid plant-hoppers 644
 Dendroctonus brevicomis western pine beetle 169
 Dendroctonus frontalis southern pine beetle 13 143 168 197 235
 Dendroctonus ponderosae mountain pine beetle 169

Dendroctonus rufipennis spruce beetle 169
Dendroctonus terebrans black turpentine beetle 171
Deodar weevil Pissodes nemorensis
Deraeocoris ruber a mirid bug 585 588 700
Dermacentor albipictus winter tick 223
Dermacentor variabilis American dog tick 268 309
Dermatophagoides pteronyssinus European house dust mite 30
Dermestes peruvianus a dermestid beetle 30
Desmia funeralis grape leafroller 440
Diabrotica spp. corn rootworms 58 64 411 432 450 465 483 503 555 576 597 619 672 694
Diabrotica balteata banded cucumber beetle 132
Diabrotica longicornis northern corn rootworm 63-65 450 465-466 484 503 525 555 597 619-620 635 672
Diabrotica undecimpunctata howardi southern corn rootworm 105 229 251 317 359 395 466 503 635
Diabrotica virgifera western corn rootworm 3-4 7 19 21 47 51 53 63-66 316 330 450 465-466 483-484 503 525 555 570 576 588 597 611 619-620 635 648 654 664 672-673 693
Diabrotica virgifera zeae a chrysomelid beetle 317 330
Dialeurodes citri citrus whitefly 328 628
Diamondback moth Plutella xylostella
Diaparsis temporalis 404 584 588
Diaphania hyalinata melonworm 136
Diaphania nitidalis pickleworm 136
Diapheromera femorata walkingstick 644 648
Diapheromera persimilis 110 112
Diapheromera velii 110 112
Diaspidiotus coniferarum a diaspidid scale 163 164 473 476 685 692
Diaspidiotus liquidambaris 347 350 563 569 627 629
Diaspidiotus mcombi 307 311
Diaspis dignus a diaspidid scale 663
Diaspis echinocacti cactus scale 284 287 642 648
Diatraea grandiosella southwestern corn borer 60-61 195 394 450 465 483 524 554 576 596 619
Diatraea saccharalis sugarcane borer 61

Dibolia borealis a chrysomelid beetle 30
Dibolia reyeria 30
Dichocrocis punctiferalis a pyralid moth 23 52
Dichomeris liulella palmerworm 30
Dichomeris marginella juniper webworm 73
Dictyospermum scale Chrysomphalus dictyospermi
Differential grasshopper Melanoplus differentialis
Dingy cutworm Feltia ducens
Diocalandra taitensis Tahitian coconut weevil 147
Diprion similis introduced pine sawfly 30 168 308
Douglas-fir tussock moth Orgyia pseudotsugata
Draeculacephala spp. leafhoppers 644
Drepanopterna sp. a grasshopper 238 310
Drepanopterna femoratum 206
Driedfruit beetle Carpophilus hemipterus
Dryocoetes villosus a scolytid beetle 113
Dryophthorus americanus a weevil 533 534
Duplaspidiotus sp. a diaspidid scale 23
Dysaphis plantaginea rosy apple aphid 266 282 305 381
Dyscinetus morator a scarab 66
Dysmicoccus mackenziei a mealybug 147
Dysmicoccus neobrevipes 24

WEEDS

Dalmatian toadflax Linaria dalmatica
Descurainia sophia flaxweed 279
 Diffuse knapweed Centaurea diffusa

E

DISEASES

Elsinoe australis sweet orange scab 272
Endocronartium harknessii western gall rust 684 691 698
Entomophthora sp. an insect fungus 6 254 268 328

Entomophthora phytonomi 6 19 27 98
 201 237 238 240 309 342 384 415-416
 583 588 608 610 699
Ergot Claviceps purpurea
Erwinia amylovora fire blight 109 149
 234 345 380 402 419 472 606
Erwinia stewartii Stewart's wilt 430
 449 523 553 617 618
Erysiphe graminis f.sp. hordei barley
 powdery mildew 360
Erysiphe graminis f.sp. tritici wheat
 powdery mildew 78 79 259 318 338 372
 396 413 434 452 466 486 505-506 674
Eyespot foot rot Pseudocercospora
herpotrichoides

INSECTS

Ear tick Otobius megnini
Earias sp. a noctuid moth 113
Eastern raspberry fruitworm Byturus
rubi
Eastern subterranean termite Reticu-
litermes flavipes
Eastern tent caterpillar Malacosoma
americanum
Echidnophaga gallinacea sticktight
 flea 1/ 190
Egyptian alfalfa weevil Hypera
brunneipennis
Elasmolomus v-album a lygaeid bug 24-
Elasmopalpus lignosellus lesser corn
 stalk borer 61 105 502 510 531 544
 581 602 603 640 658 681 682
Elenchus koebeli a strepsiptera 644
 647 648 688 691 700
Elm calligrapha Calligrapha scalaris
Elm lace bug Corythucha ulmi
Elm leaf beetle Pyrrhalta luteola
Empoasca fabae potato leafhopper 96
 99-100 323 343 376 400 416-417 418
 435 453 467 468 471 488 507 510 540
 557 560 599 602 605 637 642 678
Encarsia variegata a eulophid wasp
 286 287
Endopiza viteana grape berry moth
 561
English grain aphid Macrosiphum
avenae
Enoclerus sp. a clerid beetle 284
 287
Eotetranychus willamettei a spider
 mite 199

Epargyreus clarus silverspotted
 skipper 100 400
Ephestia albicostalis a pyralid moth
 30
Ephestia cautella almond moth 14 190
Epicauta temniscata threestriped
 blister beetle 454
Epicauta vittata striped blister
 beetle 103
Epidiaspis leperii Italian pear
 scale 152
Epilachna varivestis Mexican bean
 beetle 98 101 102-103 148 300 376
 379 400 417 436 441 454 470 471 489-
 490 509 531 543 560 570 600 605 638
 657
Epiphyas postvittana a tortricid
 moth 77
Eptimerus pyri pear rust mite 381
 beetle 117
Erannis tiliaria linden looper 173
Eriborus terebrans an ichneumonid
 wasp 57 359 431 688
Eriophyes chondrillae an eriophyid
 mite 474 533 661
Eriophyes erinea walnut blister mite
 153
Eriophyes spermaphaga n.sp. 25
Eriophyes tristriatus 187
Eriophyes tulipae wheat curl mite 261
Eriosoma lanigerum woolly apple aphid
 151 305
Eriotremex formosanus a siricid wasp
 629 700
Eritettix sp. a grasshopper 238 310
 310
Erythroneura spp. leafhoppers 440
Erythroneura comes 156 473
Erythroneura variabilis 156
Estigmene acrea saltmarsh caterpillar
 134. Traps: 94 111 164 186 199 239
 255 271 312 331 351 388 406 445-446
 477 495 517 548-549 571 589 614 630
 649 665
Eutheola humilis rugiceps sugarcane
 beetle 66
Euonymus scale Unaspis euonymi
Eupteryx atropunctata a leafhopper
 547 695
European apple sawfly Hoplocampa
testudinea
European corn borer Ostrinia nubil-
alis
European hornet Vespa crabro germana
European house dust mite Dermatoph-
agoides pteronyssinus

1/ Carried as hectopsyllid flea in
 Vol. 5.

European pine sawfly Neodiprion

sertifer

European pine shoot moth Rhyacionia

buoliana

European red mite Panonychus ulmi

Eurygaster integriceps Senn pest

121-124

Euschistus spp. a stink bug 152

Euschistus servus brown stink bug 626

Eutromula pariana apple-and-thorn

skeletonizer 150 281

Euxoa auxiliaris army cutworm 4 7 71

72 89 99 127 128 135 141 182 199 219

221 229 247 251 264 276 295 300 324.

Traps: 312 331 351 388 422 445 477

494 517 535 548 571 613 665

Euxoa detersa a noctuid moth 63 316

Euxoa messoria darksided cutworm 135

136 137 316 359 444

Euxoa ochrogaster redbacked cutworm

119 267

Exoteleia burkei a gelechiid moth 172

Eyespotted bud moth Spilonota ocell-
ana

WEEDS

Euphorbia oblongata a spurge 287

F

DISEASES

Fire blight Erwinia amylovora

Fomes annosus conifer root and heart
rot 168

Fusarium spp. fusarium crown and root
rot complex 78 80 96

a fusarium stalk rot 538 593

a root rot 134

stalk rots 53 55 633

scab 397 434 452 467 487 506 556

Fusarium lateritium f.sp. pini pitch
canker 49 167-168

Fusarium oxysporum f.sp. nicotianae

tobacco wilt 682 691 699

Fusarium solani f.sp. pisi a pea root
rot 134

Fusarium stalk rot Gibberella

(Fusarium) moniliforme

Fusiform rust Cronartium fusiforme

(Fusarium) moniliforme

Fusiform rust Cronartium fusiforme

INSECTS

Face fly Musca autumnalis

Fall armyworm Spodoptera frugiperda

Fall cankerworm Alsophila pometaria

Fall webworm Hyphantria cunea

False codling moth Cryptophlebia
leucotreta

Faronta diffusa wheat head armyworm
374. Traps: 239 255 312 351

Feltia ducens dingy cutworm 63 119
315 316 359 445-446

Feltia subterranea granulate cutworm

560. Traps: 22 51 75 94 111 130 145

164 186 199 224 239 271 312 331 351

365 388 406 422 445-446 459 477 494

517 535 548 571 613-614 630 649 665

Florinia theae tea scale 166 683 693

Florida fern caterpillar Callopietria
floridensis

Florida red scale Chrysomphalus
aonidum

Florida wax scale Ceroplastes flori-
densis

Forest tent caterpillar Malacosoma
disstria

Formica pallidefulva an ant 311

Formica perpilosa 51

Formosan subterranean termite Copto-
termes formosanus

Foxglove aphid Acyrtosiphon solani

Frankliniella bispinosa 247

Frankliniella fusca tobacco thrips
436 510 560

Frankliniella occidentalis western
flower thrips 138 152 456 641 647
700

Fruittree leafroller Archips argyro-
pilus

Fumibotys fumalis a pyralid moth 90
118

Furchadaspis zamiae a diaspidid scale
94

WEEDS

Flixweed Descurainia sophia

G

DISEASES

Gaeumannomyces graminis f.sp. tritici
take-all 145 339 397 434 486 674

Gibberella spp. stalk rots 53 55

Gibberella (Fusarium) moniliforme
fusarium stalk rot 55 500
Gibberella (Fusarium) roseum f.sp
cereal's cereal scab 434 453 516
Globodera rostochiensis golden nema-
tode 77
Gloeocercospora sorghi zonate leaf
spot 27 56
Gnomonia platani a sycamore anthrac-
nose 348
Golden nematode Globodera rostochi-
ensis
Goss's wilt Corynebacterium nebras-
kense
Grape powdery mildew Uncinula necator
Gray mold blight Botrytis cinerea
Gremmeniella abietina sclerodermis
canker 167 171
Gymnosporangium globosum cedar-haw-
thorn rust 326
Gymnosporangium juniperi-virginianae
cedar-apple rust 149 281 304 325 362
439

INSECTS

Galleria mellonella greater wax moth
18
Garden flea hopper Halticus bractatus
Garden webworm Achyra rantalis
Geocoris spp. bigeyed bugs 203
Giffard whitefly Bemisia giffardi
Giraudiella inclusa a cecidomyiid
midge 187
Goldenglow aphid Dactynotus rud-
beckiae
Gorse seed weevil Apion ulicis
Granulate cutworm Feltia subterranea
Grape berry moth Endopiza viteana
Grape cane gallmaker Ampelogypter
sesostris
Grape colaspis Colaspis brunnea
Grape leaf folder Desmia funeralis
Grape mealybug Pseudococcus maritimus
Grape plume moth Pterophorus peris-
celidactylus
Grape root borer Vitacea polistifor-
mis
Grape leaf skeletonizer Harrisina
americana
Graphognathus spp. whitefringed
beetles 454 531 543 601 625 657
Grapholitha molesta oriental fruit
moth 150 304 345 380 561
Grapholitha prunivora lesser apple-
worm 282 304 380

Grass sawfly Pachynematus extensi-
cornis
Grass thrips Anaphothrips obscurus
Grasshoppers 53 78 84 101 116 134 145
198 254 286 309-310 329 350 364 386-
387 404 474
Greater wax moth Galleria mellonella
Greedy scale Hemiberlesia rapax
Greenbug Schizaphis graminum
Green cloverworm Plathypena scabra
Green fruitworm Lithophane antennata
Green June beetle Cotinis nitida
Green peach aphid Myzus persicae
Green stink bug Acrosternum hilare
rubicunda
Greenhouse whitefly Trialeurodes
vaporariorum
Gulf Coast tick Amblyomma maculatum
Gymnaspis aechmeae a diaspidid scale
473 476 561 569 684 692
Gypsy moth Lymantria dispar
Gyropsylla ilicis a psyllid 348

SLUGS & SNAILS

Giant African snail Achatina fulica

WEEDS

Giant ragweed Ambrosia trifida

H

DISEASES

Halo blight Pseudomonas coronafaciens
Head smut Sphacelotheca reiliana
Helicotylenchus sp. a spiral nematode
8
Helminthosporium spp. leaf blotches
578 629
Helminthosporium leaf blotch Pyreno-
phora (Drechslera) chaetomoides
Helminthosporium leaf spot Cochlio-
bolus (Bipolaris) carbonum
Heterodera spp. cyst nematodes 8-9
Heterodera amaranthi 27
Heterodera glycines soybean cyst nema-
tode 8 27 73 76 102 138 489 493 657
663 680 682 691 692 699
Heterodera trifolii clover cyst nema-
tode 8
Heterodera weissi knotweed cyst nema-
tode 8

Holcus spot Pseudomonas syringae
Hoplolaimus sp. a Tance nematode
 8

INSECTS

Hadria maldonadoi a cicadid 272
Hadrotettix trifasciatus a grass-
 hopper 206
Haematobia irritans horn fly 14 50 92
 144 163 184 188 198 254 285 308
Haematopinus suis hog louse 144
Halaspis unio a diaspidid scale
 598 611
Halictophagus acutus a strepsiptera
 644 647 688 691 700 701
Halictus rubicundus a halictid bee
 269
Halisdota argentata silverspotted
 tiger moth 172 184
Halictus bractatus garden fleahopper
 72
Haptoncus sp. a nitidulid beetle 18
Harrisina americana grapeleaf
 skeletonizer 12 19 701
Harrisina brillians western grapeleaf
 skeletonizer 642 659
Head louse Pediculus humanus capitis
Heliothis spp. noctuid moths 104 117
 bollworms 115 265 280 302-303 344
 378 401 438 455-456 471 511-513 532
 560 582 603-604 640 681
Heliothis virescens tobacco budworm
 114 115 116-117 133 137 265 280 302-
 303 324 344 362 378 401 438 455-456
 471 511-513 532 555 560 582 603-604
 640 681. Traps: 94 186 239 255 271
 312 331 351 365 388 406 422 445-446
 494-495 517 548 571 589 613-614 630
 665
Heliothis zea bollworm, corn earworm
 tomato fruitworm 53 58 62-63 101
 104 105 114 115 119 133 135 137 234
 245 259 265 280 293 302-303 324 344
 359 361 378 394 401 411 431 438 450
 455-456 465 502 510 511-513 524 531
 532 544 555 559 560 581 582 596 597
 601-602 603-604 619 625 634 637 639
 640 653 658 665 671 672 681 682.
 Traps: 94 186 224 255 271 288 312
 331 351 365 388 406 422 445-446 459
 477 494-495 517 535 548-549 571-572
 589-590 613-614 630 649
Hemlula rogatalis cabbage webworm 135
Hemiberlesia diffinis a diaspidid
 scale 474 476 563 569 683 692

Hemiberlesia lataniae latania scale
 13 21 152 155 307 311 474 476
Hemiberlesia palmae a diaspidid scale
 562 569
Hemiberlesia rapax greedy scale 152
Hemileuca oliviae range caterpillar
 210 238 255 310 364 533 568 587
Hesperotettix spp. grasshoppers 458
Hesperotettix viridis 515
Hessian fly Mayetiola destructor
Heterostylum robustum a bombyliid fly
 404
Hippodamia spp. 320
Hippodamia convergens convergent lady
 beetle 130 144 185 202 238 309
Hog louse Haematopinus suis
Homeosoma electellum sunflower moth
 30 118
Honey Bee Apis mellifera
Hop aphid Phorodon humuli
Hoplocampa testudinea European apple
 sawfly 326 363
Horn fly Haematobia irritans
House fly Musca domestica
Hyalopterus pruni mealy plum aphid
 151
Hybomitra nigricans a tabanid fly
 254 309
Hydrellia tritici an ephydrid fly
 646 647 696
Hydroecia immanis a noctuid moth 63
 395 405 431 701
Hydroecia micacea potato stem borer
 402 405 411 554 570 619 629 701
Hylastes attenuatus a scolytid beetle
Hylemya antiqua onion maggot 137 325
Hylemya brassicae cabbage maggot 136
 325
Hylemya platura seedcorn maggot 183
 229 252 280 303 325
Hylobius pales pales weevil 383
Hylotrupes bajulus old house borer
 110 112
Hylurgopinus rufipes native elm bark
 beetle 286 660 663
Hypera brunneipennis Egyptian alfalfa
 weevil 7 72 89 109 128 160 182 196
 232 264 279 375 453 468
Hypera castor 30
Hypera postica alfalfa weevil 6-7 14
 15 16 48-49 71-72 96-98 109 128 142
 160 181-182 192 195-196 201 220-221
 231 237 238 249-250 254 263-264 268
 278 298-300 311 321-323 328 341-342
 349 360 375 384 387 398-399 403 415
 420 435 453 468 474 545 563-566 580
 583 584 588 608 687 688

Hypera punctata clover leaf weevil
 231 232 251 254 264 268 309 398
Hypera strigata lantana defoliator
 caterpillar 18
Hyphantria cunea fall webworm 149 153
 173
Hypoderma spp. 268
Hypoderma lineatum common cattle grub
 189

SLUGS & SNAILS

Helix aspersa brown garden snail 18
 110 112 534

WEEDS

Humulus japonicus Japanese hops 94
Hypericum perforatum St. Johnswort
 404 441

I

INSECTS

Icerya purchasi cottoncushion scale
 154
Icius hartii an attid spider 30
Imported cabbageworm Pieris rapae
Imported crucifer weevil Baris
lepidii
Indian meal moth Plodia interpunc-
tella
Introduced pine sawfly Diprion
similis
Ips typographus japonicus a scolytid
 beetle 23
Irbisia spp. mirid bugs 204
Ischnaspis longirostris black thread
 scale 383 387
Italian pear scale Epidiaspis leperii
Ixodes cookei an ixodid tick 235 240
Ixodes dentatus 686 691 701
Ixodes kingi 660 663
Ixodes sculptus 661 663
Ixodes texanus 14 21
Ixodes woodi 237 240 701

WEEDS

Iva axillaris povertyweed 664

J

INSECTS

Jack pine budworm Choristoneura pinus
 Japanese beetle Popillia japonica
 Juniper webworm Dichomeris marginella

WEEDS

Japanese hops Humulus japonicus

K

DISEASES

Kabatiella zeae corn eyespot 53 56
 481 522
 Knotweed cyst nematode Heterodera
weissi

INSECTS

Kaloterms flavicollis a termite 95
Keiferia tyopersicella tomato pin-
 worm 17 93 133 161 186 641 648
Khapra beetle Trogoderma granarium
Klamathweed beetle Chrysolina quadri-
gemina
Kuwanaspis pseudoleucaspis a dias-
 pidid scale 562 569

L

DISEASES

Laminated root and butt rot Poria
weirii
 Legume virus 102
 Lepto leaf spot Leptosphaerulina
briosiana
Leptosphaeria (Septoria) avenaria
 speckled blotch 79 318 434 486
Leptosphaeria (Septoria) nodorum
septoria glume blotch 318 372 396
 433-434 485
Leptosphaerulina briosiana lepto leaf
 spot 96 248 262 277 398 452 677
Leptotrochila medicaginis yellow leaf
 blotch 96 341 375
 Loose smut Ustilago nuda

INSECTS

Labops spp. grassbugs 163 198 204 386
Lachnus salignus an aphid 50 51
Lacinipolia renigera bristly cutworm 335-336
 Lady beetles 202
Lantana defoliator caterpillar Hypera strigata
Lantana stick caterpillar Neogalea esula
Larch casebearer Coleophora laricella
Larch sawfly Pristiphora erichsonii
Large aspen tortrix Choristoneura conflictana
Large cottony scale Pulvinaria mammeae
Larger elm leaf beetle Monocesta coryli
Lasioptera arundinis a cecidomyiid midge 131
Lasius umbratus an ant 569
Laspeyresia pomonella codling moth 149 304 326 345 362 380 402 419 439 472 490 513 535 560 582-583 606 626 641 659. Traps: 388 445-446 459 477 494 517 589 613 630
Latania scale Hemiberlesia lataniae
Lebia sp. a carabid beetle 379
Lecanium prunosum a coccid scale 153
Lecanodiaspis prosopidis a diaspidid scale 270
Lemophagus curtus an ichneumonid wasp 16 21 30 584 588
Leperisinus varius a scolytid beetle 52
Lepidosaphes laterochitina a diaspidid scale 23
Lepidosaphes pallida 12 20 110 112
Lepidosaphes ulmi oystershell scale 152
Leptinotarsa decemlineata Colorado potato beetle 132 280 303 324 344 379 401 418 439 471 490 513 544 605
Leptocera vagans a sphaerocerid fly 30 146
Leptocoris trivittatus boxelder bug 152
Lepryonia coleoptrata a cercopid bug 691 701
 Lesser appleworm Grapholitha prunivora
 Lesser cornstalk borer Elasmopalpus lignosellus
 Lesser grain borer Rhyzopertha dominica

Lesser peachtree borer Synanthedon pictipes
Leucoma salicis satin moth 174
Ligyus subtropicus a white grub 1/ 503
Lilac borer Podosesia syringae
Linden looper Erannis tiliaria
Lindingaspis tingi a diaspidid scale 272
Linognathus ovillus a smooth sucking louse 254
Lipara lucens a chloropid fly 131 225
Liriomyza spp. 75 163
Liriomyza sativae vegetable leafminer 10 133 137 161 166 196 197
Liriomyza trifolii 166
Lissorhoptrus oryzophilus rice water weevil 83 374 556
Listroderes costirostris obliquus vegetable weevil 10 137
Lithocolletis blancardella a gracil-lariid moth 149 150 281 305 380 439
Lithocolletis crataegella 281
Lithophane antennata green fruitworm 104 173
LobTolly pine sawfly Neodiprion taedae linearis
 Locust leafminer Odontota dorsalis
 Lone star tick Amblyomma americanum
Longitarsus jacobaeae a chrysomelid beetle 203 309
Longitarsus waterhousei 119
 Longlegged ant Anoplolepis longipes
Lophyproctus oblongopunctatus an ichneumonid wasp 328 330 701
Loxagrotis albicosta western bean cutworm 503 597
Lyctus simplex a lyctid beetle 131 272
Lygus spp. lygus bugs 8 9 49 72 100 129 142 233 264 279 302 361 376 400 417 435 454 469 507 541 654
Lygus lineolaris tarnished plant bug 114 116 152 182 230 233 247 261 265 266
Lymantria dispar gypsy moth 31 168 185 203 209 269 286 329 350 364 443 474 493 515 533 582 645 648 689 693
Lysiphlebus testaceipes an aphidiid wasp 185 202 238 254 309 349 525 597 609

1/ Carried as Bothynus subtropicus in Vol. 5.

WEEDS

Linaria dalmatica Dalmatian toadflax
664
Lycium ferocissimum an African box-
thorn 25
Lygodesmia juncea skeletonweed 661

M

DISEASES

Macrophomina phaseolina charcoal rot
55 56 102 526 538 541 600 634 671
679
Maize chlorotic dwarf virus 493
Maize chlorotic mottle virus 57 594
Maize dwarf mosaic virus 53 56 57 393
409-410 430 449 493 501 523 538 575
593 594 619 671
Meloidogyne sp. a root-knot nematode
114 132
Mycosphaerella (Phyllosticta) zeae-
maydis yellow leaf blight 481

INSECTS

Macrocentrus grandii a braconid wasp
50 269 394 431
Macropsis fuscata a brambleberry
leafhopper 683 691 692 701
Macrosiphoniella tanacetaria an aphid
31
Macrosiphum avenae English grain
aphid 48 81 83 127 181 247 296 341
415 453 621
Macrosiphum creelii 100
Macrosiphum euphorbiae potato aphid
133 266 471 490
Macrosteles fascifrons aster leaf-
hopper 320 415 434
Magica septendecim periodical
cicada 174
Maize billbug Sphenophorus maidis
Malacosoma americanum eastern tent
caterpillar 90 91 129 143 150 171
173-174 197 222 235 253 267-268 305
328 345 363 381 384
Malacosoma californicum western tent
caterpillar 222 261
Malacosoma disstria forest tent cat-
erpillar 168
Mallodon downesi a cerambycid beetle
289
Manduca spp. sphingid moths 117

Manduca quinquemaculata tomato horn-
worm. Traps: 94 186 271 312 331 351
388 477 494-495 517 535 548-549
571 589 613-614 630 649 665
Manduca sexta tobacco hornworm 117
362 439. Traps: 186 271 312 331 351
365 388 422 446 477 494-495 535 548-
549 571 589 613-614 630 649 665
Maple leafcutter Paraclemensia aceri-
foliella
Maruca testulalis bean pod borer 52
95
Masonaphis lambersi an aphid 31
Masonaphis pepperi 156
Matsucoccus acalyptus a margarodid
scale 143 172 235 267
Mayetiola destructor Hessian fly 81
397 415 525
McDaniel spider mite Tetranychus
mcDanieli
Meadow spittlebug Philaenus spumarius
Mealy plum aphid Hyalopterus pruni
Mecas pergrata a cerambycid beetle 31
Mecinus pyraister a weevil 610
Meconema thalassinum a katydid 686
691 701
Mediterranean fruit fly Ceratitis
capitata
Megachile rotundata alfalfa leafcut-
ting bee 202 203 457 566
Melanaspis obscura obscure scale 608
611
Melanoplus spp. 85 105 203 206 269
309-310 386-387 443 457 492 515 533
Melanoplus bivittatus two-striped
grasshopper 100 105 203 205 310 329
364 387 443 492 515 533 566 568 585
586 587 661-662 689
Melanoplus confusus 329
Melanoplus dawsoni 568 587 661-662
Melanoplus differentialis differen-
tial grasshopper 6 53 67 100 206 364
404 492 515 533 568 587 609 645 661-
662 689
Melanoplus femurrubrum redlegged
grasshopper 6 53 67 100 515 568 587
661-662
Melanoplus gladstoni 206
Melanoplus occidentalis 206 458
Melanoplus packardii Packard grass-
hopper 205 206 386 568 587 661-662
Melanoplus sanguinipes migratory
grasshopper 6 205 206 255 286 309-
310 329 350 386-387 457 515 533 566-
567 568 585 586 587 689
Melanoplus splendidus 645 648
Melanotus communis a wireworm 66 432

Melanotus cribulosus 336
Melanotus similis 432
Melittia satyriniformis squash vine borer 136
 Melon fly Dacus cucurbitae
 Melonworm Diaphania hyalinata
Meristhus sp. an elaterid beetle 272
Mermiria maculipennis a grasshopper 206
Metaseiulus occidentalis a phytoseiid mite 585
Metator pardalinus a grasshopper 206 458
Metopoplax ditomoides a lygaeid bug 241
 Mexican bean beetle Epilachna varivestis
 Mexican fruit fly Anastrepha ludens
Microctonus aethiopoïdes a braconid wasp 97 238 545 547 563 569 583 588 608 610 611-612 701
Microctonus colesi 14 19 254 564-565 568 569 584 588 701
Microplax plagiata a lygaeid bug 187
Migratory grasshopper Melanoplus sanguinipes
 Minute pirate bug Orius tristicolor
Molorchus minor a cerambycid beetle 95
Monellia caryella blackmargined aphid 306 382 456 472 491 514
Monocesta coryli larger elm leaf beetle 91 93 702
Monochamus carolinensis a cerambycid beetle 383 387
Monochamus scutellatus whitespotted sawyer 383
Monochamus titillator southern pine sawyer 532 534 627
 Mormon cricket Anabrus simplex
 Morrill lace bug Corythucha morrilli
 Mountain pine beetle Dendroctonus ponderosae
 Mourningcloak butterfly Nymphalis antiopa
Musca autumnalis face fly 129 138 188 235 268 309
Musca domestica house fly 188
Mycetaspis defectopalus a diaspidid scale 20
Myrmecocystus romainei an ant 31
Myrmica lobicornis fratricornis an ant 569
Myzus persicae green peach aphid 10 116 117-118 133 154 174 303 362 376 381 490 626
Myzus scammelli 156

SLUGS & SNAILS

Marsh slug Agriolimax laevis

WEEDS

Musk thistle Carduus nutans

N

DISEASES

Nacobbus dorsalis a false root knot nematode 1/ 9
Nigrospora sp. a fungus 91
Nomuraea rileyi an insect fungus 581
 Northern Leaf Blight Setosphaeria (Exserohilum) turcica
Nosema pyraustae corn borer protozoan 59

INSECTS

Nabis spp. damsel bugs 144 203
 Nantucket pine tip moth Rhyacionia frustrana
 Native elm bark beetle Hylurgopinus rufipes
Naupactus xanthographus a weevil 147
 Navel orangeworm Amyelois transitella
Nematus abbottii a tenthredinid sawfly 31
Nemognatha spp. meloid beetles 203
Neodiprion pratti pratti Virginia pine sawfly 267
Neodiprion sertifer European pine sawfly 50 51 328 702
Neodiprion taedae linearis loblolly pine sawfly 267
Neogalea esula lantana stick caterpillar 18
Neolasioptera helianthi a cecidomyiid midge 49 51
Neoleucinodes elegantalis a pyralid moth 23
Neopinnaspis harperi a diaspidid scale 92 93 644 648
Neorhynchocephalus sackenii a nematrinid fly 689
Neotermes sp. a termite 131 256
Nephelodes minians bronzed cutworm 84 135 348
Nesosa sp. a cerambycid beetle 225
Neurocolpus nubilus clouded plant bug 114 116

1/ Carried as false root knot nematode in Vol. 5

Nezara viridula southern green stink
 bug 101 105 325 581 658
Nipaeococcus nipae coconut mealybug
 13 20
Niphades sp. a weevil 165
Nomia melanderi alkali bee 202 364
 404 441 491
Northern corn rootworm Diabrotica
longicornis
Northern fowl mite Ornithonyssus
sylviarum
Northern masked chafer Cyclocephala
borealis
Northern pine weevil Pissodes
approximatus
Nuculaspis californica black pineleaf
 scale 50 51 473 476 685 692
Nymphalis antiopa mourningcloak
 butterfly 235

O

DISEASES

Oak wilt Ceratocystis fagacearum
Oat black loose smut Ustilago avenae
Oat crown rust Puccinia coronata f.sp.
avenae
Oat cyst nematode Bidara avenae
Oat stem rust Puccinia graminis f.sp.
avenae

INSECTS

Oak leaf-tier 168
Obliquebanded leafroller Choris-
toneura rosaceana
Obscure scale Metanaspis obscura
Odonaspis penicillata a diaspidid
 scale 162 164 557 569
Odonaspis ruthae 468 476 580 588 676
 692
Odontota dorsalis locust leafminer
 308
Oedaleonotus enigma enigma a grass-
 hopper 350 443 457 567 586
Old house borer Hylotrupes bajulus
Oleander scale Aspidiotus nerii
Olesicampe benefactor an ichneumonid
 wasp 328 330 702
Oligonychus pratensis Banks grass
 mite 67 85 412 598 636
Omophlus Tepturoides an alleculid
 beetle 424-426
Onion maggot Hylemya antiqua
Onion thrips Thrips tabaci

Operophtera brumata winter moth 11 90
 109 149 150 172-173 183 197 222 253
 266 306 347
Opisocrostitis oregonensis a dolicho-
 psyllid flea 644 648
Opuntiaspis philococcus 289
Orange spiny whitefly Aleurocanthus
spiniferus
Orchamoplatus mammaeferus a whitefly
 23 199 200 269 690 693
Orgyia pseudotsugata Douglas-fir
 tussock moth 169
Orgyia vetusta western tussock moth
 184
Oriental fruit fly Dacus dorsalis
Oriental fruit moth Grapholitha
molesta
Orius tristicolor minute pirate bug
 644
Ornithodoros hermsi an argasid tick
 237 240 702
Ornithonyssus sylviarum northern fowl
 mite 190
Orthosia hibisci a noctuid moth 253
 282
Orthotomicus suturalis a scolytid
 beetle 165
Osmilia flavolineata a grasshopper
 131
Ostrinia nubilalis European corn
 borer 3 50 53 57-60 118 133 134 195
 219 229 245 259 269 275 293 303 315
 335 359 369 393-394 401 410-411 414
 418 430-431 439 449-450 463-464 481
 482 501-502 523-524 539 554 570 575-
 576 594-596 619 634 641 648 673 688.
 Traps: 186 224 255 312 331 351 365
 388-389 406 422-423 445-446 459 477
 517 535 548-549 571-572 589-590 613-
 614 630 649 665
Otiiorhynchus spp. 119
Otiiorhynchus cribricollis cribrate
 weevil 151
Otiiorhynchus rugosostriatus 162 164
Otiiorhynchus sulcatus black vine
 weevil 660 663 702
Otobius megnini ear tick 14 20 144
Oulema melanopus cereal leaf beetle
 16 74 185 186 204 238 286 350 364
 385-386 404 441 443 457 492 546 547
 584 609
Ovalisia sp. a buprestid beetle 225
Oxypleurites acidotus an eriophyid
 mite 663
Oystershell scale Lepidosaphes
ulmi

WEEDS

Onopordum acanthium Scotch thistle
664

P

DISEASES

Papaya mosaic virus 18
Paratylenchus sp. a pin nematode 8
Peach leaf curl Taphrina deformans
Peanut leaf rust Puccinia arachidis
Pelargonium rust Puccinia pelargonii-
zonalis
Pellicularia koleroga thread blight
27
Pellicularia (Sclerotium) rolfsii
southern blight 558 678
Penicillium spp. penicillium ear rots
670
Peronosclerospora sorghi sorghum
downy mildew 3 20 53 55
Peronospora destructor onion downy
mildew
Peronospora effusa a downy mildew 136
Peronospora manshurica soybean downy
mildew 101 102 489 508 528-529 542
623 655 680
Peronospora parasitica crucifer downy
mildew 135
Peronospora tabacina blue mold 116
183
Peronospora trifoliorum alfalfa downy
mildew 96 249 277 321 341 374
Phialophora gregata brown stem rot 72
76 102 679
Phoma medicaginis spring black stem
and leaf spot 96 248-249 261-262 277
321 341 374 398 677
Phomopsis sp. a fungus 272
Phomopsis sojae, see Diaporthe
(Phomopsis) phaseolorum f.sp. sojae
Phyllosticta sp. a leaf spot 165
Phyllosticta leaf spot Phyllosticta
sojaecola
Phyllosticta sojaecola phyllosticta
leaf spot 488 527-528 558 622 655
Physotherma maydis corn brown spot 522
618
Phytophthora infestans potato/tomato
late blight 132 161 605 641
Phytophthora megasperma f.sp. sojae
phytophthora rot 101 469 488 507-
508 526 557-558 581 621-622 654 678
694

Phytophthora megasperma phytophthora
root rot 468 678
Phytophthora root rot Phytophthora
megasperma
Phytophthora rot Phytophthora megas-
perma f.sp. sojae
Pinewood nematode Bursaphelenchus
lignicolus
Pink root Pyrenochaeta terrestris
Pitch canker Fusarium lateritium
f.sp. pini
Podosphaera leucotricha apple
powdery mildew 326
Pollaccia elegans, see Venturia
(Pollaccia) populina
Polymyxa graminis a primitive root
fungus 229
Poria weirii laminated root and butt
rot 168
Potato Black scurf Rhizoctonia
solani
Potato/tomato late blight Phytoph-
thora infestans
Potato virus Y T0 116
Pratylenchus sp. a lesion nematode 8
57 306
Pseudocercospora herpotrichoides
eyespot foot rot 621 629 699
Pseudomonas andropogoni bacterial
stripe 56 409 463 500 538 575 593
618 634
Pseudomonas atrofaciens basal glume
rot 80
Pseudomonas coronafaciens halo blight
397 414 487 579 694
Pseudomonas glycinea soybean bacte-
rial blight 102 489 508-509 529 542
543 581 623-624 638 655-656 680
Pseudomonas striafaciens bacterial
stripe blight 78 80
Pseudomonas syringae bean brown spot
blight 582 605
holcus spot 56 449 553 575 593 605
618 633
Pseudopeziza medicaginis common leaf
spot 96 398 453
Puccinia spp. barley and wheat leaf
rusts 294
Puccinia arachidis peanut leaf rust
639
Puccinia asparagi asparagus rust 137
Puccinia chondrillina skeletonweed
rust 403 661
Puccinia coronata crown rust 371 396
Puccinia coronata f.sp. avenae oat
crown rust 78 275 317 396 413 433
534 539 577 629
Puccinia graminis black stem rust
514 516 545

Puccinia graminis f.sp. avenae oat stem rust 204 285 329 384 441-442 491 514 545 585 609 629
Puccinia graminis f.sp. secalis rye stem rust 405 491 545 546
Puccinia graminis f.sp. tritici a barley stem rust 285 545
wheat leaf rust 371
wheat stem rust 204 285 329 384 442 492 514 545 546 585 629 688
Puccinia hordei barley leaf rust 275 317 359 433 485 504 539
Puccinia melanocephala sugarcane rust 28 429
Puccinia pelargonii-zonalis pelargonium rust 289
Puccinia polysora southern rust 3 19 28 53 54 71 76 159 164
Puccinia purpurea sorghum leaf rust 54
Puccinia recondita a leaf rust 317
Puccinia recondita f.sp. secalis rye leaf rust 47 246 275 317 360 372 396 433 485 539
Puccinia recondita f.sp. tritici wheat leaf rust 47 78 178 229 246 275 317 337 359 396 412 433 451-452 466 484-485 504 505 539 556 576 629 674
Puccinia sorghi common maize rust 53 54 393 409 429 463 481 499-450 521 537 553 575 593 617-618 669
Puccinia striiformis stripe rust 78 317 433 485 493 504 699
Pucciniastrum areolatum a rust 95
Purple stain Cercospora kikuchii
Pyrenochaeta terrestris pink root 143
Pyrenophora (Drechslera) chaetomoides helminthosporium leaf blotch 397 486
Pyrenophora (Drechslera) graminea barley stripe 452
Pyrenophora trichostoma tan spot 4 19 78 79 246 260 276 318 339 372 397 414 467 486 556 621 674 675 699
Pythium spp. pythium damping off 1/ 169 400 677
a root rot 134

INSECTS

Pachynematus extensicornis grass sawfly 84

Pacific spider mite Tetranychus pacificus
Packard grasshopper Melanoplus packardii
Palaecrita vernata spring cankerworm 129 143-144 173 184 223 235 252 253 282 284 308 330
Pale western cutworm Agrotis orthogonia
Pales weevil Hylobius pales
Palmerworm Dichomeris ligulella
Pamphilus amplexus a pamphiliid sawfly 31
Pamphilus sitkensis 31
Panaphis juglandis an aphid 153
Pandemis pyrusana a tortricid moth 149 150
Pandora moth Coloradia pandora
Panonychus ulmi European red mite 149 152 153 266 305 346 381 440 472 606
Papaipema nebris stalk borer 336 370 395 411 432 465 483 524 605
Papaya fruit fly Toxotrypana curvicauda
Paraclemensia acerifoliella maple leafcutter 174
Paraleyrodes naranjiae a whitefly 239
Paralobesia viteana an olethreutid moth 155
Paratrioza cockerelli tomato psyllid 133
Paria quadrinotata a chrysomelid beetle 363
Paria wilcoxi 4 19
Parlatoria pergandii chaff scale 154
Parornix geminatella a gracillariid moth 149 150
Patasson luna a mymarid wasp 688 691 693 702
Pavement ant Tetramorium caespitum
Pea aphid Acyrthosiphon pisum
Peach twig borer Anarsia lineatella
Peachtree borer Synanthedon exitiosa
Pear psylla Psylla pyricola
Pear rust mite Eptitrimerus pyri
Pear sawfly Caliroa cerasi
Pecan leaf phylloxera Phylloxera notabilis
Pecan nut casebearer Acrobasis nuxvorella
Pecan serpentine leafminer Stigmella juglandifoliella

1/ Carried as damping off in part in Vol. 5.

Pecan weevil Curculio caryae
Pectinophora gossypiella pink boll-
worm 75 210 238 255 269 286 310 387
475 493 516 546 568 587 609 645 658
662 690
Pediculus humanus capitis head louse
189
PedTobius foveolatus a eulophid wasp
441
Pegomya hyoscyami beet leafminer 418
471
Pegomya rubivora raspberry cane
maggot 156
Pentamerismus erythreus a tenuipalpid
mite 129 138 702
Penthaleus major winter grain mite 5
48 71 89 127-128 141 181 220 231
298
Pepper weevil Anthonomus eugenii
Peregrinus maidis corn delphacid 239
Periclista sulfurana a tenthredinid
sawfly 50 51 253 702
Peridroma saucia variegated cutworm
83 84 96 98 119 135 136 137 150 300
325 342 345 360 399. Traps: 51 75 94
111 130 145 164 186 199 224 239 255
271 288 312 331 351 365 388-389 406
422-423 445-446 459 477 494 517 535
548-549 571-572 589-590 613-614 630
649 665
Periodical cicada Magicicada septen-
decim
Peritrechus saskatchewanensis 286 287
702
Petrobia latens brown wheat mite 141
142 144 160 181 196 220 230 248 265
277 279 298 302 321 343 400 417
Phantacrus lobatus an eriophyid mite
31
Phenacoccus solani a mealybug 31
Phenacoccus solenopsis 116
Philaenus spumarius meadow spittlebug
146 221 347 376 400 417
Phibostroma quadrimaculatum a grass-
hopper 206 458
Phloeosinus rudis a scolytid beetle
225
Phorodon humuli hop aphid 119
Phthorimaea operculella potato tuber-
worm 133
Phyllocoptruta oleivora citrus rust
mite 154 514
Phyllophaga sp. a scarab 83
Phyllophaga implicita 294
Phyllotreta pusilla western black
flea beetle 196 200 702
Phylloxera notabilis pecan leaf
phylloxera 347
Phymata pallida a phymatid bug 31
Phytocoris nigricollis a mirid bug
581 588 702
Pickleworm Diaphania nitidalis
Pieris rapae imported cabbageworm
135 183 269 303
Pimpla disparis an ichneumonid wasp
584
Pine needle scale Chionaspis pini-
foliae
Pine spittlebug Aphrophora parallela
Pink bollworm Pectinophora
gossypiella
Pinnaspis strachani a diaspidid scale
562 569
Pissodes approximatus northern pine
weevil 383
Pissodes nemorensis deodar weevil 50
51 403 405 702
Pissodes notatus banded pine weevil
52
Pissodes strobi white pine weevil 267
Pityogenes chalcographus a scolytid
beetle 289
Planococcus citri citrus mealybug 166
Plathypena scabra green cloverworm
103 182 436 531 544 602 625 639 658
Platycotis vittata a treehopper 92 94
Platynota idaeusalis a tortricid moth
151 282 305
Platypedia areolata a cicada 326
Platypsyllus castoris a leptinid
beetle 110 112
Plodia interpunctella Indian meal
moth 14
Plum curculio Conotrachelus nenuphar
Plum rust mite Aculus fockeui 683
Plutella xylostella diamondback moth
10 17 75 135 198 210 286 325
Pnirontis modesta a reduviid bug 31
Podosesia syringae ash borer 31
Podosesia syringae lilac borer 284
307
Polydrusus cervinus a weevil 48 51
540 547 702
Polygraphus polygraphus a bark beetle
131
Popillia japonica Japanese beetle
209-210 458 474 493 515 568 609 689
692
Potato aphid Macrosiphum euphorbiae
Potato leafhopper Empoasca fabae
Potato stem borer Hydroecia micacea
Potato tuberworm Phthorimaea
operculella

Pristiphora erichsonii larch sawfly 328
Prociphilus fraxinifolii an aphid 174
Prosimulium mixtum a black fly 223
 268
Prospaltella lahorensis an aphelinid wasp 328 628 629
Prospaltella smithi a eulophid wasp 199 690
Psallus variabilis a mirid bug 628 696
Psammotettix emarginatus a leafhopper 32
Pseudaletia unipuncta armyworm 48 53 61 78 81-82 84 96 99 101 134 221 229 293 295 316 319 370 373-374 395 397-398 411 414 431 434 450 465 467 483 524 539 540 576. Traps: 22 51 75 94 111 130 145 164 186 199 224 239 255 271 288 312 331 406 422-423 445-446 459 477 494-495 517 535 548-549 571-572 589-590 613-614 630 649 665
Pseudaonidia duplex camphor scale 90-91 93 267 270 702
Pseudaonidia trilobitiformis a diaspidid scale 25 187
Pseudatomoscelis seriatus cotton fleahopper 114 116 234 265 280 303 324 379 438-439 456 532
Pseudococcus comstocki Comstock mealybug 642
Pseudococcus importatus 147
Pseudococcus maritimus grape mealybug 149 151 252
Pseudoparlatoria parlatorioides a diaspidid scale 607 611
Pseudoplusia includens soybean looper 104 454 531 544 559 581 601 625 639 658 659
Psila rosae carrot rust fly 138
Psorophora columbiae a mosquito 188 686 692
Psorophora cyanescens 686 693
Psorophora ferox 686 693
Psylla pyricola pear psylla 49 90 149 152 161 183 253 266 305 326 381 402
Psylliodes picina a chrysomelid beetle 25
Pterophorus periscelidactylus grape plume moth 383
Pthirus pubis crab louse 189
Pulvinaria acericola a soft scale 684 693
Pulvinaria mammeae large cottony scale 239
Puto ulter a mealybug 147
Pycnoscelus surinamensis Surinam cockroach 693

Pyrrhalta luteola elm leaf beetle 17 308

WEEDS

Piptochaetium stipoides f.sp. purpurascens a ricegrass 25
Povertyweed Iva axillaris

Q

INSECTS

Quadraspidiotus perniciosus San Jose scale 14 92 94 143 149 152 326 381 440 626 683 693
Quadraspidiotus taxodii a diaspidid 563 569 607 608 611

R

DISEASES

Ramulispora sorghi sooty stripe 56 521 671
Rhizoctonia root rot Rhizoctonia solani
Rhizoctonia solani black potato scur 132
rhizoctonia root rot 101 376
rhizoctonia stem canker 418
Rhizoctonia stem canker Rhizoctonia solani
Rhizopus spp. head rot 118
Rhynchosporium scald Rhynchosporium secalis
Rhynchosporium secalis rhynchosporium scald 260
 Rough spot Ascochyta sorghina
 Rye leaf rust Puccinia recondita f.sp. secalis

INSECTS

Range caterpillar Hemileuca oliviae
 Raspberry cane maggot Pegomya rubivora
 Red flour beetle Tribolium castaneum
 Red imported fire ant Solenopsis invicta
 Redbacked cutworm Euxoa ochrogaster
 Redbanded leafroller Argyrotaenia velutinana
 Redlegged grasshopper Melanoplus femurrubrum

Reticulitermes flavipes eastern subterranean termite 185 198 237
Reticulitermes tibialis a termite 285
Rhagium inquisitor a cerambycid beetle 32 163 164
Rhagoletis completa walnut husk fly 153 583
Rhagoletis mendax blueberry maggot 156
Rhagoletis pomonella apple maggot 149 151 419 440 472 476 490-491 513 583 606 610 682-683 692 702
Rhantus gutticollis a dytiscid beetle 32
Rhinocyllus conicus a weevil 203 384 441 474 609 661
Rhipicephalus sanguineus brown dog tick 92 93 190
Rhizaspidiotus dearnessi a diaspidid scale 12 20 562 569
Rhizococcus caladii a mealybug 17 19 696
Rhizococcus hibisci 25
Rhopalosiphum fitchii apple grain aphid 234 253
Rhopalosiphum maidis corn leaf aphid 66 83 220 339 341 371 411 451 466 484 503 525 539 556 576 621 673
Rhopalosiphum padi an aphid 5 51 78 81 83 89 127 141 181 220 230 247 297
Rhopalosiphum rufiabdominalis rice root aphid 138
Rhopobota naevana naevana blackheaded fireworm 155
Rhyacionia sp. an olethreutid moth 172
Rhyacionia buoliana European pine shoot moth 171
Rhyacionia frustrana Nantucket pine tip moth 163 198 253 363
Rhynchites sp. a weevil 77
Rhyzopertha dominica lesser grain borer 348 350
Rice root aphid Rhopalosiphum rufiabdominalis
Rice water weevil Lissorhoptrus oryzophilus
Rice weevil Sitophilus oryzae
Rose scale Aulacaspis rosae
Rosy apple aphid Dysaphis plantaginea

WEEDS

Rhamnus sp. a buckthorn 534
Rush skeletonweed Chondrilla juncea

Russian knapweed Centaurea repens
Russian thistle Salsola kali

SLUGS AND SNAILS

Rumina decollata a subulinid snail 287

S

DISEASES

Scleroderris canker Gremmeniella abietina
Sclerophthora macrospora crazy top 28 56
wheat downy mildew 80 319 339
Sclerotinia sp. a rot 10
Sclerotinia sclerotiorum
sclerotinia stem rot 118
a white mold 161 582
Sclerotinia stem rot Sclerotinia sclerotiorum
Septoria spp. septoria complex 79 577 629
Septoria glume blotch Leptosphaeria (Septoria) nodorum
Septoria glycines soybean brown spot 102 454 488 508 527 541-542 581 600 622 637-638 680
Septoria lycopersici tomato leaf blight 132
Septoria tritici speckled leaf blotch 78 79 159 178 229 246 259 275-276 318 337-338 372 451-452 466 485 504 505 674
Setosphaeria (Exserohilum) turcica
northern leaf blight 54 393 553 593 669
Shoestring root rot Armillaria mellea
Skeletonweed rust Puccinia chondrillina
Smooth-spored bunt Tilletia foetida
Soil-borne wheat mosaic virus 81 159 178 229 246-247 260 270 276 373 636 648 675
Sooty stripe Ramulispora sorghi
Sorghum downy mildew Peronosclerospora sorghi
Sorghum leaf rust Puccinia purpurea
Sorghum leaf streak Xanthomonas holcicola
Southern anthracnose Colletotrichum trifolii
Southern blight Pellicularia (Sclerotium) rotfsii

Southern leaf blight Cochliobolus
 (Bipolaris) heterostrophus
 Southern rust Puccinia polysora
 Soybean bacterial blight Pseudomonas
glycinea
 Soybean brown spot Septoria glycines
 Soybean cyst nematode Heterodera
glycines
 Soybean downy mildew Peronospora
manshurica
 Soybean mosaic virus 489 509 530 558-
 559 624-625 656-657
 Soybean pod and stem blight Diaporthe
 (Phomopsis) phaseolorum f.sp. sojae
 Soybean stem canker Diaporthe phase-
olorum f.sp. caulivora
 Speckled blotch Leptosphaeria
 (Septoria) avenaria
 Speckled leaf blotch Septoria tritici
Sphacelotheca reiliana head smut 55
 593 610 618 674 692 699
Sphacelotheca sorghi covered kernel
 smut 55 670
 Spot blotch Cochliobolus (Bipolaris)
sativus
 Spring black stem and leaf spot Phoma
medicaginis
 Stalk rots 670
 Stem and bulb nematode Ditylenchus
dipsaci
Stemphylium botryosum stemphylium
 leaf blight 96
Stemphylium leaf blight Stemphylium
botryosum
 Stewart's wilt Erwinia stewartii
 Stone fruit bacterial spot Xantho-
monas pruni
 Stripe rust Puccinia striiformis
 Sugarcane rust Puccinia melano-
cephala
 Summer black stem and leaf spot
Cercospora medicaginis
 Sweet orange scab Elsinoe australis

INSECTS

Saddleback caterpillar Sibine
stimulea
 Saltmarsh caterpillar Estigmene acrea
 Saltmarsh mosquito Aedes sollicitans
 San Jose scale Quadraspidiotus
perniciosus
Saperda carcharias a cerambycid
 beetle 52
Sarcophaga sinuata a sarcophagid wasp
 330
 Satin moth Leucoma salicis

Scaphytopius magdalensis a leaf-
 hopper 12
Scapteriscus spp. mole crickets 85
 136
Scapteriscus acletus southern mole
 cricket 128
Scatopse notata a scatopsid fly 662
 663 702
Schizaphis graminum greenbug 4 48 66-
 67 71 80 83 89 127 141 144 160 179-
 180 202 219 229-230 231 238 240 247
 254 261 276-277 295-296 298 309 317
 319-320 336-337 340 349 359 370-371
 374 395 398 412 434 451 466 484 525
 555 597-598 609 620 621 635
Scirtothrips aurantii a thrips 147
Scirtothrips citri citrus thrips
 284
Scolytus intricatus a scolytid
 beetle 187
Scolytus multistriatus smaller
 European elm bark beetle 112 383
 563 570 643 648 660 664
Scolytus ruquulosus shothole borer 151
Screwworm Cochliomyia hominivorax
Scytodes thoracica a scytodid spider
 32
 Seedcorn maggot Hylemya platura
Semiothisa santaremaria a geometrid
 moth 18
 Senn pest Eurygaster integriceps
 Sequoia pitch moth Synanthedon
sequoiae
Sericothrips variabilis soybean
 thrips 104 377 417 455
 Shieldbacked pine seedbug Tetyra
bipunctata 32
 Shothole borer Scolytus ruquulosus
Sibine stimulea saddleback cater-
 pillar 166
 Silverspotted skipper Epargyreus
clarus
 Silverspotted tiger moth Halisidota
argentata
Simulium vittatum a black fly 223 285
Singa eugeni an orb spider 144 146
 702
Sinoxylon sp. a bostrichid beetle 241
Sipha flava yellow sugarcane aphid 32
 360 371 466
Sitophilus oryzae rice weevil 130 144
 190
Situlaspis yuccae a diaspidid scale
 268
 Smaller European elm bark beetle
Scolytus multistriatus

Smicronyx pinguis a weevil 659 663
 703
Solanaceous treehopper Antianthe
expansa
Solenopsis invicta red imported fire
 ant 75 130 138 202 210 269 270
Sorghum midge Contarinia sorghicola
Sorghum webworm Celama sorghiella
South African emex weevil Apion
antiquum
Southern armyworm Spodoptera eridania
Southern chinch bug Blissus insularis
Southern corn billbug Sphenophorus
callosus
Southern corn rootworm Diabrotica
undecimpunctata howardi
Southern green stink bug Nezara
viridula
Southern masked chafer Cyclocephala
immaculata
Southern mole cricket Scapteriscus
acletus
Southern pine beetle Dendroctonus
frontalis
Southern pine sawyer Monochamus
titillator
Southwestern corn borer Diatraea
grandiosella
Soybean Tooper Pseudoplusia includens
Soybean thrips Sericothrips vari-
abilis
Sphaeroterms sphaerophorax a termite
 165
Sphenophorus callosus southern corn
 billbug 53 65 111 246 259 336
Sphenophorus maidis maize billbug 53
 65 111 259
Sphenoptera jugoslavica a buprestid
 beetle 628
Spider mite destroyer Stethorus
picipes
Spider mites 120
Spilonota ocellana eyespotted bud
 moth 304
Spissistilus festinus threecornered
 alfalfa hopper 99 128 160 233 302
 376 469 540 625
Spodoptera eridania southern armyworm
 133
Spodoptera exigua beet armyworm 11 17
 99 109 166 599 604 625 637 639 672
 676 681. Traps: 22 51 75 199 239 255
 271 288 312 331 351 365 388 406 422
 445 477 494 517 535 548 571 589 613-
 614 630 640 649 665

Spodoptera frugiperda fall armyworm
 53 61 62 84 115 135 195 210 245 293
 316 359 370 395 411 431 453 467 470
 502 544 554 555 556 560 582 596 602
 619 634 636 637 639 640 671 675-676
 677-678 681. Traps: 94 186 255 271
 288 312 331 351 365 388 422 445-446
 459 477 494-495 517 535 548-549 571
 589 613-614 630 649 665
Spodoptera ornithogalli yellowstriped
 armyworm 116 303 483. Traps: 94 186
 224 239 255 271 288 312 331 351 365
 388 406 422 445-446 459 477 494-495
 517 535 548-549 571 589 613-614 630
 649 665
Spotted alfalfa aphid Therioaphis
maculata
Spotted asparagus beetle Crioceris
duodecimpunctata
Spotted cutworm Amathes c-nigrum
Spring cankerworm Paleacrita vernata
Spruce beetle Dendroctonus rufipennis
Spruce budworm Choristoneura fumi-
ferana
Squash bug Anasa tristis
Squash vine borer Melittia satyrini-
formis
Stalk borer Papaipema nebris
Stegopterna mutata a black fly 223
Steneotarsonemus pallidus cyclamen
 mite 156
Stenodontes sp. a cerambycid beetle
 187
Stenolechia bathrodyas a gelechiid
 moth 184 186 191 197 642 648 696
Stenoma catenifer avocado seed moth
 352-355
Stephanitis pyrioides azalea lace bug
 167
Stethorus picipes spider mite de-
 stroyer 269 585
Stethorus punctum a coccinellid
 beetle 151
Stibadium spumosum a noctuid moth
 32
Sticktight flea Echidnophaga
gallinacea
Stigmella juglandifoliella pecan
 serpentine leafminer 1/ 153
Stilbus apicalis a phytocid beetle
 662 663 703
Strawberry weevil Anthonomus signatus

1/ Carried as Nepticula juglandi-
foliella in Vol. 5.

Strawberry whitefly Trialeurodes
packardii
Striped blister beetle Epicauta
vittata
Striped cucumber beetle Acalymma
vittata
Sugarcane beetle Euetheola humilis
rugiceps
Sugarcane borer Diatraea saccharalis
Sunflower beetle Zygogramma
exclamationis
Sunflower moth Homoeosoma electellum
Supella longipalpa brownbanded cock-
 roach 348 350
Surinam cockroach Pycnoscelus
surinamensis
Sybra sp. a cerambycid beetle 272
Synanthedon exitiosa peachtree borer
 380 402 439 472 490 641
Synanthedon pictipes lesser peachtree
 borer 266 282 304 326 345 380 439
 472 490 641
Synanthedon sequoiae sequoia pitch
 moth 223
Syrbula admirabilis a grasshopper
 206

WEEDS

Salsola iberica a Russian thistle 628
Salsola kali Russian thistle 661
Scotch thistle Onopordum acanthium
Senecio jacobaea tansy ragwort 309
Skeletonweed Lygodesmia junceae
Solanum dulcamara bitter nightshade
 418
Solanum nigrum black nightshade 418
Spotted knapweed Centaurea maculosa
St. Johnswort Hypericum perforatum
Striga asiatica witchweed 686
Striga gesnerioides cowpea witchweed
 26

T

DISEASES

Take-all Gaeumannomyces graminis
f.sp. tritici
Tan spot Pyrenophora trichostoma
Taphrina deformans peach leaf curl
 149 281 380
Thread blight Pellicularia koleroga
Tilletia foetida smooth-spored bunt
 79 114 674
Tobacco wilt Fusarium oxysporum f.sp.
nicotianae

Tomato bacterial spot Xanthomonas
vesicatoria
Tomato leaf blight Septoria lycoper-
sici
Tomato mosaic virus 10
Tomato/potato early blight Alternaria
solani
Tylenchorhynchus sp. a stunt nematode
 57

INSECTS

Tabanus cymatophorus a tabanid fly 32
Tahitian coconut weevil Diocalandra
taitensis
Talponia batesi an olethreutid moth
 113
Tarnished plant bug Lygus lineolaris
Tea scale Fiorinia theae
Tegoprius dentatus an eriophyid
 mite 686
Telostylus lineolatus a neriid fly
 646 647 696
Tenspotted lady beetle Coelophora
pupillata
Tenuipalpus celtidis a tenuipalpid
 mite 686 693
Tetraleurodes acaciae a whitefly 174
Tetramesa sp. a eurytomid wasp 95
Tetramorium caespitum pavement ant
 350
Tetranychus spp. tetranychid mites
 105 272
Tetranychus cinnabarinus carmine
 spider mite 286
Tetranychus homorus a tetranychid
 mite 686 691 703
Tetranychus ludeni 164
Tetranychus mcdanieli McDaniel spider
 mite 149 152
Tetranychus mexicanus a tetranychid
 mite 11 19 696
Tetranychus pacificus Pacific spider
 mite 267
Tetranychus urticae twospotted spider
 mite 67 120 149 152 156 167 253 412
 436 440 472 484 490 510 531 598 602
 636 658
Tetranychopsis horridus a spider mite
 641 647 703
Tetrastichus coccinellae a eulophid
 wasp 17 19 697
Tetrastichus incertus 474 569 612
Tetrastichus julis 32 74 76 204 546
 584 588 703
Tetyra bipunctata shieldbacked pine
 seedbug 32

Thamnosphecia culiciformis an
 aegeriid moth 660 663
Thecesternus affinis 6 19 703
Therioaphis maculata spotted alfalfa
 aphid 8 49 72 90 96 100 109 128 142
 160 182 196 221 233 252 264 300 301
 361 375 416 453 469 488 526 557 600
Threecornered alfalfa hopper Spissi-
stilus festinus
Threestriped blister beetle Epicauta
lemniscata
Thrips obscuratus 187
Thrips tabaci onion thrips 198
Thyridopteryx ephemeriformis bagworm
 166 307
Tobacco budworm Heliothis virescens
Tobacco flea beetle Epitrix hirti-
pennis
Tobacco hornworm Manduca sexta
Tobacco thrips Frankliniella fusca
Tobacco wireworm Conoderus vesper-
tinus
Tomato fruitworm Heliothis zea
Tomato hornworm Manduca quinque-
maculata
Tomato pinworm Keiferia lycopersi-
cella
Tomato psyllid Paratrioza cockerelli
Tomicus piniperda a scolytid beetle
 256
Toumeyella liriodendri tuliptree
 scale 642 648
Toumeyella virginiana a soft scale
 685 693
Toxotrypana curvicauda papaya fruit
 fly 154
Trialeurodes abutilonea bandedwinged
 whitefly 604
Trialeurodes packardii strawberry
 whitefly 156
Trialeurodes vaporariorum greenhouse
 whitefly 17
Tribolium castaneum red flour beetle
 190
Trichodes ornatus a clerid beetle 203
Trichoplusia ni cabbage looper 11 104
 119 135 137 210 280 325 637. Trap:
 94 186 199 239 255 271 288 312 331
 351 365 388 406 445-446 459 477 494-
 495 517 535 548-549 571 589 613-614
 630 649 665
Trogoderma granarium khapra beetle 77
Tropical horse tick Anocentor nitens
Tropisternus salsamentus a hydro-
 philid beetle 32 286 287
Trypodendron domesticum a scolytid
 beetle 77 225

Trypodendron signatum 241
Tuliptree scale Toumeyella lirio-
dendri
Twospotted spider mite Tetranychus
urticae
Two-striped grasshopper Melanoplus
bivittatus
Typhlocyba pomaria white apple leaf-
 hopper 149 151 346 491 583 659
Tyria jacobaeae cinnabar moth 203 309

WEEDS

Tansy ragwort Senecio jacobaea

U

DISEASES

Uncinula necator grape powdery mildew
 155
Uromyces phaseoli f.sp. typica bean
 rust 161
Uromyces striatus alfalfa rust 96
Ustilago sp. a loose smut 319
Ustilago avenae oat black loose smut
 1/ 78 79 414 486
Ustilago maydis common smut 53 54 393
 397 409 429 449 499 516 521 537 553
 575 593 617 633 669
Ustilago nuda loose smut 80 319 339
 360 373 397 467 487 540 556 578 629
 674

INSECTS

Uloma possibly bonzica a tenebrionid
 beetle 26
Unaspis citri citrus snow scale 154
Unaspis euonymi euonymus scale 166
Urophora affinis a tephritid fly 203
 628 661

V

DISEASES

Vaccinium shoestring virus 156
Venturia inaequalis apple scab 149
 266 281 326 380 472

1/ Carried as oat loose smut in part
in Vol. 5.

Venturia (Pollaccia) populina (Pollaccia elegans stage) black poplar shoot blight 28 171
Verticicladiella procera a pine root decline 307
Verticicladiella wagnerii black stain root disease 168
Verticillium albo-atrum verticillium wilt 114 132 171 637 647 699
Verticillium wilt Verticillium albo-atrum

INSECTS

Variegated cutworm Peridroma saucia
 Vegetable leafminer Liriomyza sativae
 Vegetable weevil Listroderes costirostris obliquus
Velataspis dentata a diaspidid scale 563 569
 Velvetbean caterpillar Anticarsia gemmatilis
Vespa crabro germana European hornet 16 20 692
Vespula maculata baldfaced hornet 202
Vespula pensylvanica western yellow-jacket 18 202 270 690 693
 Vexans mosquito Aedes vexans
 Virginia pine sawfly Neodiprion pratti pratti
Vitacea polistiformis grape root borer 155 382

W

DISEASES

Western gall rust Endocronartium harknessii
 Wheat downy mildew Sclerophthora macrospora
 Wheat leaf rust Puccinia recondita f.sp. tritici
 Wheat powdery mildew Erysiphe graminis f.sp. tritici
 Wheat spindle streak mosaic virus 261
 Wheat stem rust Puccinia graminis f.sp. tritici
 Wheat streak mosaic virus 57 78 80 276 319 339 373 675
 Wheat striate mosaic virus 556
 White line mosaic virus 653 663 671 691 692 699

White mold Sclerotinia sclerotiorum
 White pine blister rust Cronartium ribicola

INSECTS

Walkingstick Diaperomera femorata
 Walnut blister mite Eriophyes erineae
 Walnut caterpillar Datana integerrima
 Walnut husk fly Rhagoletis completa
 Wardrobe beetle Attagenus fasciatus
 Western bean cutworm Loxotropa albicosta
 Western black flea beetle Phyllotreta pusilla
 Western corn rootworm Diabrotica virgifera
 Western flower thrips Frankliniella occidentalis
 Western grapeleaf skeletonizer Harrisina brillians
 Western pine beetle Dendroctonus brevicornis
 Western raspberry fruitworm Rhyacionia bakersi
 Western spruce budworm Choristoneura occidentalis
 Western tent caterpillar Malacosoma californicum
 Western tussock moth Orgyia vetusta
 Western yellowjacket Vespula pensylvanica
 Wheat curl mite Eriophyes tulipae
 Wheat head armyworm Faronta diffusa
 White apple leafhopper Typhlocyba pomaria
 White pine weevil Pissodes strobi
 Whitespotted sawyer Monochamus scutellatus
 Winter grain mite Penthaleus major
 Winter moth Operophtera brumata
 Winter tick Dermacentor albipictus
 Wohlfahrtia vigila a sarcophagid fly 189
 Woolly apple aphid Eriosoma lanigerum
 Woolly whitefly Aleurothrixus floccosus

WEEDS

Witchweed Striga asiatica

X

DISEASES

Xanthomonas alfalfae alfalfa
bacterial leaf spot 96 599
Xanthomonas holcicola sorghum leaf
streak 56 500 575 634
Xanthomonas phaseoli bacterial bean
blight 102
Xanthomonas phaseoli f.sp. sojensis
bacterial pustule 102 400 469 530
 543 600 656 680
Xanthomonas pruni stone fruit
bacterial spot 149
Xanthomonas translucens f.sp.
undulosa black chaff 80 434
Xanthomonas vesicatoria tomato
bacterial spot 161
Xiphinema spp. dagger nematodes 8
 57 347
Xiphinema bakeri 93
Xiphinema insigne 647

INSECTS

Xanthochroa trinotata an oedemerid
beetle 647 703
Xyleborus eurygraphus a scolytid
beetle 256
Xylocopa virginica carpenter bee 285
Xylosandrus compactus black twig
borer 643 647 648 703
Xylosandrus crassiusculus a scolytid
beetle 32

Y

DISEASES

Yellow leaf blight Mycosphaerella
(Phyllosticta) zeae-maydis
Yellow leaf blotch Leptotrochila
medicaginis

INSECTS

Yellow scale Aonidiella citrina
Yellowstriped armyworm Spodoptera
ornithogalli
Yellow sugarcane aphid Sipha flava

Z

DISEASES

Zonate leaf spot Gloeocercospora
sorgi

INSECTS

Zodion obliquefasciatum a conopid fly
 404 491
Zygogramma exclamationis sunflower
beetle 119

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

Official Business
Penalty for Private Use, \$300



34/033NIDMDHYNN R1 CPR-0001
C H HOFFMANN
6906 40TH AVE
HYATTSVILLE MD 20782

